UNITED STATES PATENT AND TRADEMARK OFFICE

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BEYER WEAVER & THOMAS LLP
P.O. BOX 778
BERKELEY, CA 94704-0778

MAURO JR, THOMAS J

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 09/605,917	Applicant(s) AVIANI ET AL.
	Examiner Thomas J. Mauro Jr.	Art Unit 2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2003*.

2a)☒ This action is **FINAL.** 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-57* is/are pending in the application.

　　4a) Of the above claim(s) *1-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

　　a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2 & 3* .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

DETAILED ACTION

1.   This action is responsive to the amendment of the application (Paper # 5) filed on

11/17/2003. Claims 1-25 have been cancelled. New claims 26-57 are presented for

examination.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 26, 35 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by He et

al. (U.S. 6,671,259).

With respect to claim 26, He teaches a method implemented within a client side device

for facilitating redirection of traffic between a server and a client to between the client and a

selected one from a plurality of replicas, the method comprising:

at a client side device associated with the client, receiving a start packet from a client

associated with the client side device, the start packet having a destination identifier associated

with a server [He -- **Col. 5 lines 3-5 – Client DNS system receives request with destination identifier, i.e. URL and resolves this to an IP address**];

at the client side device adding a tag to the start packet to indicate that the start packet should be later forwarded by a device other than a client side device to any replica that duplicates the data content of the server [He -- **Col. 11 lines 23-27 – System allows client to decide whether requests are to be "load balanced" or not, i.e. tagged. Hence, before arriving at the server side, a tag or bit in the packet would be required to have been set to identify whether or not the request is the be "load balanced"**];

at the client side device storing the destination address of the start packet and associating the destination address with the start packet's connection [He -- **Col. 11 lines 34-40 – Once IP is resolved at client, address is stored associating that IP address with a given request such that subsequent requests are directly routed to the resolved IP**]; and

after tagging the start packet, forwarding the start packet towards the server [He -- **Col. 5 lines 49-57 – Request is sent to server-side components to be load balanced, if tagged, and will eventually reach the server**].

With respect to claim 35, this is a system claim corresponding to the method claimed in claim 26. It has similar limitations; therefore, claim 35 is rejected under the same rationale.

With respect to claim 44, this is a computer program product claim corresponding to the method claimed in claim 26. It has similar limitations; therefore, claim 44 is rejected under the same rationale.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 26-28 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Brendel (U.S. 6,182,139) in view of He et al. (U.S. 6,671,259).

Regarding claim 26, Brendel teaches the invention substantially as claimed, a method

implemented within a client side device for facilitating redirection of traffic between a server and

a client to between the client and a selected one from a plurality of replicas, the method

comprising:

at a client side device associated with the client, receiving a start packet from a client

associated with the client side device, the start packet having a destination identifier associated

with a server **[Brendel -- Figure 8 and Col. 11 lines 20-21 – First SYN packet, i.e. start**

packet, is generated and sent to client side dispatcher];

at the client side device storing the destination address of the start packet and associating

the destination address with the start packet's connection **[Brendel -- Figure 8 and Col. 11 lines**

21-22 – Dispatcher stores the packet and makes an entry in translation table]

Brendel fails to teach tagging the start packet to indicate the request should be load-balanced,

sending the packet towards the server to be later forwarded to any server that duplicates the

content by a device other than one on the client side.

He, however, teaches indicating whether certain requests from a client should be "load

balanced", i.e. sent to replica servers if they exist **[He -- Col. 11 lines 23-27 – System allows**

client to decide whether requests are to be "load balanced" or not, i.e. tagged. Hence,

before arriving at the server side, a tag or bit in the packet would be required to have been

set to identify whether or not the request is the be "load balanced"], and forwarding the

requests towards the server to be routed by a device other than a client side device to one of these

replicas **[He -- Col. 5 lines 49-57 – Request is sent to server-side components to be load**

balanced, if tagged, and will eventually reach the server].

While Brendel dispatches, i.e. "load balances", the request on the client side, the reference does

teach that load balancing can be also accomplished on the server side **[Brendel -- Col. 16 lines**

12-14] and that it is more powerful and has more capabilities if done server side **[Brendel -- Col.**

5 lines 46-48].

Therefore, because both systems remedy the same type of problems, i.e. congestion problems, by

load balancing, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to incorporate the tagging of start packets to indicate load balancing along

with forwarding the packets onto the server side to be dispatched to a replica server, as taught by

He into the invention of Brendel, in order to increase the power and capabilities of the load

balancer and to give the user more control to let he/she decide if their requests should be load

balanced.

Regarding claim 27, Brendel-He teach the invention substantially as claimed, further

comprising:

at the client side device, receiving an acknowledgement packet in response to the start

packet [**Brendel -- Figure 8 and Col. 11 lines 40-41 – SYN+ACK packet is sent back from**

responding server];

at the client side device, when the acknowledgement packet is the first received

acknowledgement for such start packet and a replica of the server is the source of the

acknowledgement packet, storing the replica's address and associating the replica's address with

the stored server address for this connection [**Brendel -- Figure 8, Col. 11 lines 20-21 and lines**

57-61 – In order for the packets to go to the replica server when the destination address is

that of the original server, an association of addresses in the address translation look-up

table would be necessary to correlate the original servers address with that of the

appropriate replica];

at the client side device, after storing and associating the replica address of the first

acknowledgement packet, replacing the replica's address of the acknowledgement packet with

the stored server address and then forwarding the acknowledgement packet to the client

[**Brendel -- Figure 8 (SYN+ACK(0) is shown sent back to client) and Col. 11 lines 44-45 –**

The SYN+ACK packet is sent back to client after having replaced the replica address with

the stored server address];

at the client side device, when the acknowledgement packet is not the first received

acknowledgement packet for such start packet, forwarding a reset to the source of the

acknowledgement packet [**Brendel -- Figure 8 and Col. 11 lines 40-43 – First to respond is**

selected and subsequent packets from other servers cause the connection with these servers

to be closed by sending a reset RST packet]; and

at the client side device when the acknowledgement packet is the first received

acknowledgement packet for such start packet and when the server is the source of the

acknowledgement packet, deleting the stored server address for this connection **[Brendel -- Col.**

7 lines 29-35 – If the SYN+ACK packet is received from the original source server, the

entry in the table is deleted and session proceeds normally].

Regarding claim 28, Brendel-He teach the invention substantially as claimed, further

comprising:

at the client side device when a subsequent packet associated with the start packet is

received that is not a start packet or an acknowledgement packet and when there is a replica

address stored for this connection and when the subsequent packet is from the client, replacing

the destination address of the subsequent packet with the stored replica address for this

connection prior to forwarding the subsequent packet towards its destination **[Brendel -- Col. 11**

lines 46-50 – After receiving the SYN + ACK packet, subsequent requests are intercepted

and the destination address is changed to the relocated server, i.e. replica address];

at the client side device when a subsequent packet associated with the start packet is

received that is not a start packet or an acknowledgment packet and when there is a replica

address stored for this connection and when the subsequent packet is not from the client,

replacing the source address of the subsequent packet with the stored server address for this

connection prior to forwarding the subsequent packet towards its destination **[Brendel -- Col. 11**

lines 46-50 – Packets are forwarded by replacing the destination address with the replica address, i.e. relocated server, regardless of the client using the system]; and

forwarding the subsequent packet towards its destination **[Brendel -- Col. 11 lines 50-52 – Packet is transmitted to server for the requested data]**.

Regarding claim 33, Brendel-He teach the invention substantially as claimed, wherein the start packet is only tagged when the start packet is associated with web data **[Brendel -- Col. 15 lines 54-55 – In the current embodiment, only URL's, i.e. web data, are tagged to be "load balanced"]**, and the method further comprising forwarding the start packet to the serer without the tag when the start packet is not associated with web data **[Brendel -- Col. 16 lines 4-8 – While "other internet traffic" could be implemented with this system, currently it is not applied, only web data]**.

Regarding claim 34, Brendel-He teach the invention substantially as claimed, wherein the start packet is associated with web data when the start packet has a destination port utilized for accessing web data. While not explicitly taught in the reference, Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art that one can quickly and easily discern web data from other Internet traffic by looking at the destination port number i.e. 80. Because using port 80 is widely known in the art for accessing web data, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a check for web data by destination port number into the invention of Brendel-He in order to quickly and easily obtain the type of data from the packet.

6.   Claims 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel

(U.S. 6,182,139) and He et al. (U.S. 6,671,259) as applied to claim 27, 29 and 31 above

respectively, and further in view of Malkin (U.S. 6,247,054).

        Regarding claim 29, Brendel-He teach the invention substantially as claimed, as

aforementioned in claim 27 above, but fail to teach cracking the acknowledgement packet to

obtain the source identifier prior to storing the replica's address and encapsulating the cracked

acknowledgement packet with a source address prior to forwarding the acknowledgement packet

to the client.

Malkin teaches decapsulating, i.e. cracking, the packet to gain access to its data, i.e. the address

[Malkin -- Col. 4 lines 44-46] and then encapsulating the packets in order to preserve the

destination address of the original packet before being redirected **[Malkin -- Col. 3 lines 34-38]**.

In view of the teachings of Malkin, it would have been obvious to a person of ordinary skill in

the art at the time the invention was made to incorporate the encapsulating and cracking of

packets, as taught by Malkin into the invention of Brendel-He, in order to provide a means for

preserving the integrity of the original information, i.e. the address contained within the contents

of the packets.

        Regarding claim 30, Brendel-He-Malkin teach the invention substantially as claimed, as

aforementioned in claim 29 above, further comprising:

        at the client side device when a subsequent packet associated with the start packet is

received that is not a start packet or an acknowledgement packet and when there is a replica

address stored for this connection and when the subsequent packet is from the client, replacing

the destination address of the subsequent packet with the stored replica address for this

connection **[Brendel -- Col. 11 lines 46-50 -- After receiving the SYN + ACK packet,**

subsequent requests are intercepted and the destination address is changed to the relocated

server, i.e. replica address] and then forwarding the subsequent packet towards its destination

[Brendel -- Col. 11 lines 50-52 -- Packet is transmitted to server for the requested data]; and

at the client side device when a subsequent packet associated with the start packet is

received that is not a start packet or an acknowledgement packet and when the subsequent packet

is not from the client, forwarding the subsequent packet towards its destination **[Brendel -- Col.**

7 lines 29-35 -- If the SYN+ACK packet is received from the original source server, the

session proceeds normally and packets are forwarded regardless of the client using the

system].

Regarding claim 31, Brendel-He-Malkin teach the invention substantially as claimed, as

aforementioned in claim 27 above, further comprising:

at the client side device, cracking the acknowledgement packet to obtain the source

identifier prior to storing the replica's address or forwarding a reset to the source of the

acknowledgement packet **[Malkin -- Col. 4 lines 44-46 -- Packet must be cracked first before**

doing anything in order to obtain the address encapsulated in the packet. After which, it

can forward a reset RST packet to the source if necessary (Brendel Col. 11 lines 40-43)];

and

wherein the cracked acknowledgement packet is forwarded to the client **[Brendel --**

Figure 8 (SYN+ACK(0) is shown sent back to client) and Col. 11 lines 44-45 -- The

SYN+ACK packet is sent back to client after having cracked the encapsulated ACK

packet].

Regarding claim 32, Brendel-He-Malkin teach the invention substantially as claimed, as

aforementioned in claim 31 above, further comprising:

at the client side device when a subsequent packet associated with the start packet is

received that is not a start packet or an acknowledgement packet and when there is a replica

address stored for this connection and when the subsequent packet is from the client,

encapsulating the subsequent packet **[Malkin -- Col. 3 lines 34-38 -- Packets are encapsulated**

within the new packet before being sent] with the stored replica address for this connection

prior to forwarding the subsequent packet towards its destination **[Brendel -- Col. 11 lines 46-50**

-- After receiving the SYN + ACK packet, subsequent requests are intercepted and the

destination address is changed to the relocated server, i.e. replica address];

at the client side device when a subsequent packet associated with the start packet is

received that is not a start packet or an acknowledgment packet and when there is a replica

address stored for this connection and when the subsequent packet is not from the client,

cracking the subsequent packet **[Malkin -- Col. 4 lines 44-46 -- Packet must be cracked first**

before doing anything in order to obtain the address encapsulated in the packet] prior to

forwarding the subsequent packet towards its destination **[Brendel -- Col. 11 lines 46-50 --**

Packets are forwarded by replacing the destination address with the replica address, i.e.

relocated server, regardless of the client using the system]; and

forwarding the subsequent packet towards its destination **[Brendel -- Col. 11 lines 50-52 – Packet is transmitted to server for the requested data]**.

7.   Claims 35-37 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel (U.S. 6,182,139) in view of He et al. (U.S. 6,671,259).

Regarding claim 35, Brendel teaches the invention substantially as claimed, a computer system for facilitating redirection of traffic between a server and a client to between the client and a selected one from a plurality of replicas, the computer system comprising:

a memory; and

a processor coupled to the memory **[Brendel -- Col. 18 lines 52-67 – Computers inherently contain one or more processors, memory, and various other components. Therefore, by teaching a computer, the reference teaches a processor and memory for carrying out the methods]**. The remaining limitations recited in claim 35 are similar to those claimed in the method of claim 26. Therefore, claim 35 is rejected under the same rationale.

Regarding claims 36-37 and 42-43, these are system claims corresponding to the method claimed in claims 27-28 and 33-34. They have similar limitations; therefore, claims 36-37 and 42-43 are rejected under the same rationale.

8.   Claims 38, 39, 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Brendel (U.S. 6,182,139) and He et al. (U.S. 6,671,259) as applied to claims 36, 38 and 40 above

respectively, and further in view of Malkin (U.S. 6,247,054).

Regarding claims 38-41, these are system claims corresponding to the method claimed in

claims 29-32. They have similar limitations; therefore, claims 38-41 are rejected under the same

rationale.

9.   Claims 44-46 and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Brendel (U.S. 6,182,139) in view of He et al. (U.S. 6,671,259).

Regarding claim 44, Brendel teaches the invention substantially as claimed, a computer

program product for facilitating redirection of traffic between a server and a client to between the

client and a selected one from a plurality of replicas, the computer program product comprising:

at least one computer readable medium;

computer program instructions stored within the at least one computer readable product

**[Brendel -- Col. 19 lines 33-52 – Instructions for carrying out methods are stored on

computer readable medium].**

The remaining limitations of claim 44 are similar to the limitations of method claim 26.

Therefore, claim 44 is rejected under the same rationale.

Regarding claims 45-46 and 51-52, these are computer program product claims corresponding to the method claimed in claims 27-28 and 33-34. They have similar limitations; therefore, claims 45-46 and 51-52 are rejected under the same rationale.

10.   Claims 47, 48, 49 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel (U.S. 6,182,139) and He et al. (U.S. 6,671,259) as applied to claims 45, 47 and 49 above, and further in view of Malkin (U.S. 6,247,054).

11.   Regarding claims 47-50, these are computer program product claims corresponding to the method claimed in claims 29-32. They have similar limitations; therefore, claims 47-50 are rejected under the same rationale.

12.   Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brendel (U.S. 6,182,139) in view of He et al. (U.S. 6,671,259).

Regarding claim 53, this claim is similar to the method claimed in claim 26. Therefore, claim 53 is rejected under the same rationale.

13.   Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al.

(U.S. 6,470,389), He et al. (U.S. 6,671,259) and Malkin (U.S. 6,247,054).

Regarding claim 54, Chung teaches the invention substantially as claimed, a method

implemented within a server side device of facilitating redirection of traffic between a client and

a server or a plurality of replicas of the server, the method comprising:

at a server side device receiving a packet that is traveling between a client and a server or

between the client and a replica, the server and the replica being associated with the server side

device **[Chung -- Col. 7 lines 62-64 – Dispatcher, on server side, receives packets from**

router];

at the server side device when the received packet is a start packet being sent from the

client to the server and the server's data content is replicable, forwarding the start packet to any

replica that duplicates the data content of the server **[Chung -- Col. 8 lines 1-7 – Chung**

determines which server to route the request to and forwards it to that server]; and

forwarding the received packet to its specified destination **[Chung -- Col. 8 lines 3-7 –**

Packet is forwarded to the server].

Chung, however, fails to teach encapsulating the packet. Malkin, however, teaches

encapsulating packets in order to preserve the integrity of the packet for transmission **[Malkin --**

Col. 3 lines 34-38].

In view of the teachings of Malkin, it would have been obvious to a person of ordinary skill in

the art at the time the invention was made to incorporate the encapsulating of packets, as taught

by Malkin into the invention of Chung, in order to provide a means for preserving the integrity of

the original information, i.e. the address contained within the contents of the packets.

In addition, Chung fails to teach that the packet has been tagged by a device other than a server

side device.

He, however, teaches indicating whether certain requests from a client should be "load

balanced", i.e. sent to replica servers if they exist by a device other than a server side device **[He**

-- Col. 11 lines 23-27 – System allows client to decide whether requests are to be "load

balanced" or not, i.e. tagged. Hence, before arriving at the server side, a tag or bit in the

packet would be required to have been set to identify whether or not the request is the be

"load balanced"].

Therefore, because both systems try to remedy the same type of problems, i.e. congestion

problems, by load balancing, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to incorporate the tagging of start packets to indicate whether

requests should be load balanced or not, as taught by He into the invention of Chung, in order to

increase the control that the user has allowing them to decide if their requests should be load

balanced.

14.   Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al.

(U.S. 6,470,389), He et al. (U.S. 6,671,259) and Malkin (U.S. 6,247,054).

Regarding claim 55, Chung teaches the invention substantially as claimed, a server system operable to facilitate redirection of traffic between a client and a server or a plurality of replicas of the server, the computer system comprising:

a memory; and

a processor coupled to the memory **[Chung -- Col. 7 lines 45-47 – By having an operating system (OS), it is inherent that the dispatcher, in order for the OS to process tasks and store/run not only itself but also the routing algorithm correctly, a processor and memory must be contained within the dispatcher]**,

wherein at least one of the memory and the processor are adapted for:

receiving a packet that is traveling between a client and a server or between the client and a replica, the server and the replica being associated with the server side device **[Chung -- Col. 7 lines 62-64 – Dispatcher, on server side, receives packets from router]**;

when the received packet is a start packet being sent from the client to the server and the server's data content is replicable, forwarding the start packet to any replica that duplicates the data content of the server **[Chung -- Col. 8 lines 1-7 – Chung determines which server to route the request to and forwards it to that server]**; and

forwarding the received packet to its specified destination **[Chung -- Col. 8 lines 3-7 – Packet is forwarded to the server]**.

Chung, however, fails to teach encapsulating the packet. Malkin, however, teaches encapsulating packets in order to preserve the integrity of the packet for transmission **[Malkin -- Col. 3 lines 34-38]**.

In view of the teachings of Malkin, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the encapsulating of packets, as taught by Malkin into the invention of Chung, in order to provide a means for preserving the integrity of the original information, i.e. the address contained within the contents of the packets.

In addition, Chung fails to teach that the packet has been tagged by a device other than a server side device.

He, however, teaches indicating whether certain requests from a client should be "load balanced", i.e. sent to replica servers if they exist by a device other than a server side device **[He -- Col. 11 lines 23-27 – System allows client to decide whether requests are to be "load balanced" or not, i.e. tagged. Hence, before arriving at the server side, a tag or bit in the packet would be required to have been set to identify whether or not the request is the be "load balanced"]**.

Therefore, because both systems try to remedy the same type of problems, i.e. congestion problems, by load balancing, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the tagging of start packets to indicate whether requests should be load balanced or not, as taught by He into the invention of Chung, in order to increase the control that the user has allowing them to decide if their requests should be load balanced.

15.   Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. (U.S. 6,470,389), He et al. (U.S. 6,671,259) and Malkin (U.S. 6,247,054).

Regarding claim 56, Chung teaches the invention substantially as claimed, a computer

program product for facilitating redirection of traffic between a client and a server or a plurality

of replicas of the server, the computer program product comprising:

at least one computer readable medium;

computer program instructions stored within the at least one computer readable product

[Chung -- Col. 7 lines 45-47 - A dispatcher which includes an operating system, i.e. server

which inherently contains instructions for carrying out the dispatching tasks], configured

for:

receiving a packet that is traveling between a client and a server or between the client and

a replica, the server and the replica being associated with the server side device **[Chung -- Col. 7**

lines 62-64 – Dispatcher, on server side, receives packets from router];

when the received packet is a start packet being sent from the client to the server and the

server's data content is replicable, forwarding the start packet to any replica that duplicates the

data content of the server **[Chung -- Col. 8 lines 1-7 – Chung determines which server to**

route the request to and forwards it to that server]; and

forwarding the received packet to its specified destination **[Chung -- Col. 8 lines 3-7 –**

Packet is forwarded to the server].

Chung, however, fails to teach encapsulating the packet. Malkin, however, teaches

encapsulating packets in order to preserve the integrity of the packet for transmission **[Malkin --**

Col. 3 lines 34-38].

In view of the teachings of Malkin, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the encapsulating of packets, as taught by Malkin into the invention of Chung, in order to provide a means for preserving the integrity of the original information, i.e. the address contained within the contents of the packets.

In addition, Chung fails to teach that the packet has been tagged by a device other than a server side device.

He, however, teaches indicating whether certain requests from a client should be "load balanced", i.e. sent to replica servers if they exist by a device other than a server side device **[He -- Col. 11 lines 23-27 – System allows client to decide whether requests are to be "load balanced" or not, i.e. tagged. Hence, before arriving at the server side, a tag or bit in the packet would be required to have been set to identify whether or not the request is the be "load balanced"]**.

Therefore, because both systems try to remedy the same type of problems, i.e. congestion problems, by load balancing, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the tagging of start packets to indicate whether requests should be load balanced or not, as taught by He into the invention of Chung, in order to increase the control that the user has allowing them to decide if their requests should be load balanced.

16.   Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. (U.S. 6,470,389), He et al. (U.S. 6,671,259) and Malkin (U.S. 6,247,054).

Regarding claim 57, Chung teaches the invention substantially as claimed, an apparatus

[Chung -- Col. 3 line 66 – Apparatus] for facilitating redirection of traffic between a client and

a server or a plurality of replicas of the server, comprising:

means receiving a packet that is traveling between a client and a server or between the

client and a replica, the server and the replica being associated with the server side device

[Chung -- Col. 7 lines 62-64 – Dispatcher, on server side, receives packets from router];

means receiving when the received packet is a start packet being sent from the client to

the server and the server's data content is replicable, forwarding the start packet to any replica

that duplicates the data content of the server **[Chung -- Col. 8 lines 1-7 – Chung determines**

which server to route the request to and forwards it to that server]; and

means receiving forwarding the received packet to its specified destination **[Chung --**

Col. 8 lines 3-7 – Packet is forwarded to the server].

Chung, however, fails to teach encapsulating the packet. Malkin, however, teaches

encapsulating packets in order to preserve the integrity of the packet for transmission **[Malkin --**

Col. 3 lines 34-38].

In view of the teachings of Malkin, it would have been obvious to a person of ordinary skill in

the art at the time the invention was made to incorporate the encapsulating of packets, as taught

by Malkin into the invention of Chung, in order to provide a means for preserving the integrity of

the original information, i.e. the address contained within the contents of the packets.

In addition, Chung fails to teach that the packet has been tagged by a device other than a server

side device.

He, however, teaches indicating whether certain requests from a client should be "load

balanced", i.e. sent to replica servers if they exist by a device other than a server side device **[He**

-- Col. 11 lines 23-27 – System allows client to decide whether requests are to be "load

balanced" or not, i.e. tagged. Hence, before arriving at the server side, a tag or bit in the

packet would be required to have been set to identify whether or not the request is the be

"load balanced"].

Therefore, because both systems try to remedy the same type of problems, i.e. congestion

problems, by load balancing, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to incorporate the tagging of start packets to indicate whether

requests should be load balanced or not, as taught by He into the invention of Chung, in order to

increase the control that the user has allowing them to decide if their requests should be load

balanced.

Response to Arguments

17.   Applicant's arguments with respect to claims 26, 35, 44, and 53-57 have been considered

but are moot in view of the new ground(s) of rejection.

Conclusion

18.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234.

The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the

organization where this application or proceeding is assigned is 703-746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-3900.

TJM
January 23, 2004

DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100